STATE OF VERMONT
PUBLIC SERVICE BOARD

Petition of Vermont Gas Systems, Inc., requesting a Certificate of Public Good pursuant to 30 V.S.A. § 248, authorizing the construction of the "Addison Rutland Natural Gas Project Phase 2 (ARNGP Phase 2)" to extend natural gas transmission facilities in Franklin and Addison Counties, for service to the Ticonderoga mill in New York, and construction of two Community Gate Stations for distribution service in the towns of Cornwall and Shoreham, Vermont	))))))))))	Public Service Board Docket No. 8180

PREFILED TESTIMONY OF JULIE FOLEY FOLLENSBEE

On Behalf of the Vermont Agency of Natural Resources, Department of Environmental Conservation, Wetlands Program

Summary of Testimony

Ms. Foley is a Wetlands Ecologist and provides an overview of the potential impacts of the Project on wetlands and outlines the steps required to obtain a wetlands permit.

Q1. Please state your name, place of employment and your position.

A1. My name is Julie Foley Follensbee (Julie Foley professionally). I am a District Wetlands Ecologist for the Wetlands Program within the Watershed Management Division of the Vermont Department of Environmental Conservation

Q2. Please provide a brief background of your professional background and tenure at the Agency of Natural Resources.

A2. I have been employed as a District Wetland Ecologist for seven years. As a District Wetlands Ecologist I identify wetlands, determine wetland classification and assess impacts to functions and values for a variety of project types. I am responsible for wetland identification, protection and permitting in four counties. My primary role at the Agency is to identify wetlands, evaluate functions and values, determine classification and assist the public to avoid and minimize wetland impacts.

Prior to working for ANR, I worked in hazardous and contaminated materials consulting as a field scientist and project manager.

My resume is attached as Exhibit ANR JF-1.

Q3. Please describe your educational background and any relevant certifications that you hold.

A3. I have a Master's of Science in Natural Resources from the University of Vermont's Rubenstein School of Natural Science and a Bachelor's degree in Geology from Colgate University.

Q4. Have you engaged in any training or classes while at the Agency related to your work with wetlands?

A4. I have attended 40-hour training on the Army Corps of Engineers Wetland Delineation Manual and Regional Supplement Methodology. I have attended a number of one-day in house and interagency trainings. I have also provided wetland-related training to consultants, Agency staff, and college students. Additionally, I have attended conferences, seminars and work groups relating to wetlands and delineation.

Q5. Have you previously provided testimony to the Public Service Board, the Environmental Court, or District Commissions?

A5. Yes. I have provided testimony to the Public Service Board and District Commissions, and have been identified as an expert and anticipate testifying at the upcoming Costco consolidated appeals before the Environmental Court.

Q6. What is the purpose of your testimony?

A6. To give the Agency's overall perspective on the project as it relates to wetlands. My testimony will focus on the portion of the project in Addison County. The Agency has already issued a wetland permit for the Phase VII Looping project in Georgia.

Q7. Please describe the scope of your review of the proposed project?

A7. I have visited some of the alignment and viewed much of the alignment from a distance. I have reviewed multiple Natural Resource Assessment plan iterations, the Wetland Hydrology Study, Attachment A.ANR:VGS.1-8, the Shoreham Swamp Pipeline Alternatives Analysis, Attachment A.ANR:VGS.1-11, and Jeff Nelson's pre-filed testimony. Approximately, 5.4 miles of the alignment are not currently accessible due to denial of access, so not only does my review not include visits to these areas, but there is no associated wetland data available for my review of impacts to these areas.

Q8. Can you identify the wetlands that will be impacted by the project?

A**8.** Approximately 130 wetlands have been delineated within the 11/19/13 alignment, 76 of which have been preliminarily deemed significant or Class II by VHB. Twenty-six additional "approximate" wetlands have been identified by VHB, 19 of which have been preliminarily deemed Class II by VHB. It should be noted that these 26 "approximate" wetlands, and any others that have yet to be identified, have not been evaluated in the field.

Q9. Are any of these wetlands subject to protection under the state wetland rules and will the Project require a Wetlands Permit?

A9. Yes. The project proposes to impact approximately 15 acres of Class II wetlands and buffer zones. A Vermont Wetland Permit is required for all impacts, permanent and temporary, other than those impacts considered Allowed Uses under the Vermont Wetland Rules. Because the project proposes to impact Class II wetlands and buffer zones, an Individual Wetland Permit must be applied for and obtained prior to commencement of activities within said wetlands and buffer zones.

Q10. Has Vermont Gas applied for a wetlands permit?

A10. No.

Q11. What is the process or standard for evaluating a wetland permit application?

A11. In general terms, a Vermont Wetland Permit application must include a complete application form describing the project, the wetlands to be impacted, avoidance and minimization measures, and statements of no undue adverse impact. Additionally, a complete Individual Wetland Permit application shall have completed wetland delineations for all wetland and buffer zone impacts, complete and detailed project plans showing the delineations and proposed impacts, associated fees calculated based on square footage of impacts, and Army Corps of Engineers (ACOE) delineation forms for all wetlands.

Based on the information provided in the Wetland Permit Application and through the District Wetlands Ecologist's evaluation of wetland functions and values in the field, the Wetlands Program makes a determination as to whether the project will or will not have an undue adverse impact on wetland functions. For projects with more than minimal impacts to protected functions and values, the applicant must demonstrate that those impacts have been avoided and minimized to the extent practicable. This may include an evaluation of alternate project alignments or locations to first avoid impacts where practicable, and then measures to minimize impacts where avoidance is not possible.

Q12. Will the project have more than a minimal impact on the wetlands or wetland buffers?

A12. Yes. The project currently proposes to impact approximately 15 acres of Class II wetlands and buffers zones primarily for access, trenching, pipe installation and vegetation removal. This impact is considered more than minimal, thereby requiring further avoidance and minimization under the Vermont Wetland Rules.

Q13. Have you accessed all of the wetlands that are within the project corridor/alignment?

A13. No. According to VHB, approximately 22% of the project's wetland impacts have not been evaluated by VGS, and therefore cannot be confirmed by ANR, due to landowner

access denial. VHB has identified 26 approximate wetlands, 19 of which are presumed significant Class II wetlands. Additionally, there may be other wetlands present that cannot be identified remotely. The natural resource inventory and mapping provided by VGS for these areas are based on remote sensing. Approximate wetland boundaries based on remote sensing are not sufficient to evaluate impacts to wetland functions and values, and do not provide the information necessary to determine whether the project will result in an undue adverse impact to these functions and values. Remote sensing is not a delineation and is not sufficient to quantify wetland impacts for the purposes of issuing a Vermont Wetland Permit. The Agency cannot make a finding or recommendation of no undue adverse impact when we do not even know if all wetlands have been identified and properly assessed.

Q14. For those areas that have not yet been field delineated, can the locations and boundaries of the wetlands and wetland buffers be identified or confirmed?

A14. No. Wetlands cannot be delineated remotely. There is a specific methodology for delineating wetlands (1987 Corps of Engineers Wetlands Delineation Manual and the corresponding Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region) that requires on the ground evaluation of soils, vegetation and hydrology. This work cannot be done without access to the wetlands in the field.

Q15. Can you provide a description of the wetlands or wetland buffers that are within the proposed Vermont Gas alignment right of way?

A16. Although much of the wetland area proposed to be impacted is considered agricultural lands or developed land, a notable portion of the wetland impacts are to wetlands that are part of three regionally significant swamps, namely Cornwall Swamp, Shoreham Swamp and Farmingdale Swamp. These three swamps provide most, if not all of the functions and values protected under the Vermont Wetland Rules including wildlife and fisheries habitat functions, stormwater and floodwater storage function, exemplary wetland natural community function, and rare, threatened and endangered species habitat function. The Cornwall Swamp complex is the largest and one of the most exceptional wetland complexes in the state. All ten functions and values that are identified and protected under the Vermont Wetland Rules are present at a significant level in Cornwall Swamp. The wetland is important as a wildlife corridor and for migratory birds. Additionally, tracts of adjacent, wet farmland are being actively restored through the NRCS Wetland Reserve Easement Program. Shoreham Swamp is an approximately 1,000-acre seepage swamp at the headwaters of the Lemon Fair River that is fed by numerous streams, overland flow and groundwater. Farmingdale Swamp is approximately 500-acres and is associated with the Otter Creek floodplain. Besides the above-named swamps, there are numerous riparian wetlands that provide protective functions to adjacent streams and rivers.

Q17. Based upon the information that has been provided by Vermont Gas in support of its 248 Petition, are you in a position to evaluate whether the project will have an undue adverse impact on the functions and values of the wetlands.

A17. No. There are a number of reasons why I cannot evaluate whether the project will have an undue adverse impact on the functions and values of the protected wetlands. Most significantly, nearly a quarter of the line has not been visited or field delineated. Evaluation of functions and values of wetlands and potential impacts to those functions and values must include on the ground assessment as they are largely based on the physical characteristics of the wetland that cannot be viewed from a computer or across a valley. For example, there is no way for us to know if Rare, Threatened or Endangered plants are present in the proposed corridor without on the ground assessment.

Another major reason I cannot make a statement of no undue adverse impact is because the applicant has not demonstrated sufficient avoidance and minimization to meet the mitigation standard in the Vermont Wetland Rules. The applicant has not provided the Wetlands Program with sufficient alternatives with corresponding justification for discounting them. We are most concerned about impacts to the significant natural communities associated with Cornwall and Shoreham swamps. There appear to be reasonable alternatives that would eliminate or greatly reduce potential impacts to Shoreham Swamp, in particular where the 11/19/2013 and the 5/16/2014 alignments follow the perimeter of approximately 25% of the swamp edge.

Lastly, and related to the preceding paragraph, we do not have enough information to be able to evaluate potential hydrologic impacts to Cornwall, Shoreham and Farmingdale Swamps. Although, VHB was very recently contracted by VGS to prepare a study regarding these impacts, I have not had enough time to review and evaluate the 152 page report that was received on 6/5/14 and presented to ANR on 6/6/14, as well as a follow-up letter received on June11, 2014.

Q18. What additional information would you need from Vermont Gas?

A18. The wetland delineations and site visits for the wetlands on the remaining 22% of the project are needed in order to properly review impacts to wetland functions and values and are necessary to deem a Vermont Wetland Permit application complete. The Petitioner has not demonstrated through either the 11/19/13 alignment, or the proposed 5/16/14 alignment, wetland avoidance which is the first step of the requisite mitigation sequencing. ANR has suggested one possible reroute (of any number of possibilities) for Shoreham Swamp that seems viable, though has been discounted by the Petitioner. ANR believes that the current alignment is not the least damaging alternative and additional practicable avoidance and minimization measures are available to satisfy the project purpose.

Q19. Do you have any concerns about the proposed alignment and its path through the Farmingdale, Cornwall, and Shoreham Swamps?

A19. Yes. Farmingdale, Cornwall and Shoreham Swamps are significant for the Exemplary Wetland Natural Community function due to their unusual community assemblages and as such they make an important contribution to Vermont's natural heritage. Impacts to these natural communities are not easily recreated or compensated for. Although some measures have been taken to minimize impacts to these wetlands and associated communities, measures have been limited to some minimization and not avoidance as required by the Vermont Wetland Rules. Further avoidance and minimization is possible and necessary in the case of Cornwall, Shoreham, and Farmingdale Swamps. Results from the very recent hydrology study may assuage the need for additional minimization at the Farmingdale Swamp northern crossing. In addition, there are many other wetlands within the proposed right-of-way that are yet to be evaluated. Additional avoidance and minimization measures will likely be required to achieve no undue adverse impacts to Class II wetlands as required in the Vermont Wetland Rules.

Q20. Do you have any recommendations for how Petitioner can avoid or minimize impacts to these wetlands?

A20. There are numerous route alignments that would result in less or no impact to Farmingdale, Cornwall and Shoreham swamps in particular. For example, a routing of the pipeline from the northern tip of Shoreham swamp, to the west across North Cream

Hill Road and then to the southeast would almost entirely eliminate impacts to Shoreham Swamp which is currently bound on the eastern side by the proposed pipeline.

Q21. In response to discovery, Vermont Gas, through VHB, has produced ANR: VGS.1-11 "Shoreham Swamp Pipeline Alternatives Analysis" which evaluates this alignment, known as alignment 4, have you reviewed that analysis and do you concur with its conclusions.

A21. Yes, I have reviewed it and do not concur with the results of the analysis. I think it is important to state that ANR was not consulted prior to the selection of the November alignment, (alignment 1). From the time it was notified of the November alignment, ANR has requested and recommended that VG explore alternatives that avoid the three named swamps. Vermont Gas first proposed moving the line slightly away from the interior of the swamps, but still largely within the approximate boundaries of the wetlands and buffer zones. To convey our request that Vermont Gas should explore true avoidance alternatives, ANR roughed out a conceptual route that could largely avoid Shoreham Swamp. Nearly four months after ANR presented this conceptual route, VHB presented it largely unchanged as Alternative 4. Although ANR suggested a general location for a potential alignment, the precise location of where this alternative could be located to maximize distances from houses, the quarry, wetlands, or other features was expected to be part of the VT Gas and VHB assessment of this alternative.

The alternatives analysis does not evaluate the relative impacts to wetland functions and values, nor does it distinguish between the presumed classification of these wetlands. Had it properly engaged in this relative comparison, it is highly likely that impacts to Class II wetlands from alternative 3 would be found to be far greater than those from alternative 4. The wetlands proposed to be impacted by the alternative 3 alignment are part of Shoreham Swamp, a known exemplary wetland natural community possessing most, if not all of the protected functions and values that can be attributed to a wetland. In contrast, most of the wetlands associated with alignment 4 are likely to be farmed emergent wet meadows associated with surface drainage and are not expected to contribute to most functions including exemplary wetland natural community, recreation, and education & research to a significant level. These wetlands have not been evaluated or their classification considered in the alternatives analysis. An evaluation of the relative impacts to presumed functions and values indicates that alternative 4 would have significantly less impacts to protected functions and values than Alternative 3, the May 16, 2014 alignment.

VHBs conclusion that Alignment 4 has increased potential temporary disruption of agricultural land uses and future subdivision for the associated landowners is an overstatement and is not supported by the discussion portion of the study that indicates that both alignment 3 and 4 may temporarily disrupt agricultural uses and limit future subdivision potential.

Q22. **Has Vermont Gas demonstrated that the pipeline cannot practicably be located outside Shoreham Swamp?**

A22. No. The information provided to date, including the alternatives analysis described above, has not demonstrated that the Shoreham Swamp cannot practically be avoided.

Q24. Do you have any recommendations to the Board for conditions to be included in any CPG issued for this project?

A24. The Wetlands Program has yet to determine whether the Project will result in no undue adverse effect to the protected functions and values. If it does make this finding it will issue a permit. If it does not, it cannot issue a wetlands permit for the proposed project. I will make recommendations for CPG conditions in rebuttal following the filing of any alignment changes by Vermont Gas. To protect the functions and values of these wetlands any CPG issued should be conditioned on Vermont Gas obtaining and complying with an Individual Wetlands Permit.

Q25. Does this conclude your testimony?

A. Yes.